

AMENDMENT TO THE CLAIMS:

54. (currently amended) An apparatus comprising:

an interbody spinal fusion implant for surgical implantation within a disc space between two adjacent vertebral bodies in a segment of a human spine, said implant comprising upper and lower portions for contacting each of the adjacent vertebral bodies when positioned therein, each of said upper and lower portions having at least one opening adapted to communicate with one of the adjacent vertebral bodies, said openings of said upper and lower portions being in communication with one another and adapted for permitting for the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, a hollow interior for holding bone growth promoting material, said hollow interior being in communication with at least one opening in each of said upper and lower portions, said implant having an insertion end for entry into the spine and a trailing end, said trailing end having a rear wall between said upper and lower portions, said rear wall being integrally formed with said upper and lower portions of said implant; and

bone morphogenetic protein for promoting bone growth contained within
at least a portion of said hollow interior to promote bone growth from adjacent vertebral body to adjacent vertebral body through said implant; and
a fusion promoting material other than bone and other than bone morphogenetic protein, said fusion promoting material being in at least a portion of said hollow interior to promote bone growth from adjacent vertebral body to adjacent vertebral body through said implant.

55. (previously added) The apparatus of claim 54, wherein at least a portion of said upper and lower portions are arcuate along at least a portion of their length.
56. (previously added) The apparatus of claim 54, wherein said upper and lower portions further comprise a protrusion for engaging the adjacent vertebral bodies.
57. (previously added) The apparatus of claim 56, wherein said protrusion is a thread.
58. (previously added) The apparatus of claim 54, wherein at least one of said insertion and trailing ends is open for loading bone growth promoting material into said hollow interior.
59. (previously added) The apparatus of claim 58, further comprising an end cap for closing said open end.
60. (previously added) The apparatus of claim 54, wherein said hollow interior is a chamber and the bone growth promoting material includes a bone graft.
61. (previously added) The apparatus of claim 54, wherein said implant is configured for implantation across the disc space in the thoracolumbar region of the human spine.
62. (previously added) The apparatus of claim 54, wherein said spinal implant includes an artificial material other than bone.
63. (previously added) The apparatus of claim 54, wherein said implant is made of an artificial material that is stronger than bone.
64. (previously added) The apparatus of claim 54, wherein said implant is made of an artificial material that is harder than bone.

65. (previously added) The apparatus of claim 54, wherein said implant comprises harvested bone.
66. (previously added) The apparatus of claim 54, wherein said implant is in combination with bone growth promoting material.
67. (previously amended) The apparatus of claim 66, wherein said bone growth promoting material includes hydroxyapatite.
68. (previously added) The apparatus of claim 54, wherein said implant is treated with a bone growth promoting substance.
69. (previously added) The apparatus of claim 54, wherein said implant is a source of osteogenesis.
70. (previously added) The apparatus of claim 54, wherein said implant is at least in part bioabsorbable.
71. (previously added) The apparatus of claim 54, wherein said implant comprises metal.
72. (previously added) The apparatus of claim 54, wherein said implant comprises a plastic material.
73. (previously added) The apparatus of claim 54, wherein said implant comprises a ceramic material.
74. (previously added) The apparatus of claim 54, wherein said implant is formed of a porous material.
75. (previously added) The apparatus of claim 54, wherein said implant is formed of a material that intrinsically participates in the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.

76. (previously added) The apparatus of claim 54, wherein said at least one opening is adapted to retain fusion-promoting materials
77. (previously added) The apparatus of claim 54, wherein at least a portion of said implant is treated to promote bone ingrowth between said implant and said adjacent vertebral bodies.
78. (previously added) The apparatus of claim 54, wherein said implant is in combination with harvested bone.
79. (new) An apparatus comprising:

an interbody spinal fusion implant for surgical implantation within a disc space between two adjacent vertebral bodies in a segment of a human spine, said implant comprising upper and lower portions for contacting each of the adjacent vertebral bodies when positioned therein, each of said upper and lower portions having at least one opening adapted to communicate with one of the adjacent vertebral bodies, said openings of said upper and lower portions being in communication with one another and adapted for permitting for the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, a hollow interior for holding bone growth promoting material, said hollow interior being in communication with at least one opening in each of said upper and lower portions, said implant having an insertion end for entry into the spine and a trailing end, said trailing end being adapted so as to be connectable to another interbody spinal implant having a trailing end adapted to be connected to said interbody spinal fusion implant;

bone morphogenetic protein in at least a portion of said hollow interior to

promote bone growth from adjacent vertebral body to adjacent vertebral body through said implant; and

a fusion promoting material other than bone and other than bone morphogenetic protein, said fusion promoting material being in at least a portion of said hollow interior to promote bone growth from adjacent vertebral body to adjacent vertebral body through said implant.

- 80. (new) The apparatus of claim 79, wherein at least a portion of said upper and lower portions are arcuate along at least a portion of their length.
- 81. (new) The apparatus of claim 79, wherein said upper and lower portions further comprise a protrusion for engaging the adjacent vertebral bodies.
- 82. (new) The apparatus of claim 81, wherein said protrusion is a thread.
- 83. (new) The apparatus of claim 79, wherein at least one of said insertion and trailing ends is open for loading bone growth promoting material into said hollow interior.
- 84. (new) The apparatus of claim 83, further comprising an end cap for closing said open end.
- 85. (new) The apparatus of claim 79, wherein said hollow interior is a chamber and the bone growth promoting material includes a bone graft.
- 86. (new) The apparatus of claim 79, wherein said implant is configured for implantation across the disc space in the thoracolumbar region of the human spine.
- 87. (new) The apparatus of claim 79, wherein said spinal implant includes an artificial material other than bone.

88. (new) The apparatus of claim 79, wherein said implant is made of an artificial material that is stronger than bone.
89. (new) The apparatus of claim 79, wherein said implant is made of an artificial material that is harder than bone.
90. (new) The apparatus of claim 79, wherein said implant comprises harvested bone.
91. (new) The apparatus of claim 79, wherein said implant is in combination with bone growth promoting material.
92. (new) The apparatus of claim 91, wherein said bone growth promoting material includes hydroxyapatite.
93. (new) The apparatus of claim 79, wherein said implant is treated with a bone growth promoting substance.
94. (new) The apparatus of claim 79, wherein said implant is a source of osteogenesis.
95. (new) The apparatus of claim 79, wherein said implant is at least in part bioabsorbable.
96. (new) The apparatus of claim 79, wherein said implant comprises metal.
97. (new) The apparatus of claim 79, wherein said implant comprises a plastic material.
98. (new) The apparatus of claim 79, wherein said implant comprises a ceramic material.
99. (new) The apparatus of claim 79, wherein said implant is formed of a porous material.

100. (new) The apparatus of claim 79, wherein said implant is formed of a material that intrinsically participates in the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.
101. (new) The apparatus of claim 79, wherein said at least one opening is adapted to retain fusion-promoting materials
102. (new) The apparatus of claim 79, wherein at least a portion of said implant is treated to promote bone ingrowth between said implant and said adjacent vertebral bodies.
103. (new) The apparatus of claim 79, wherein said implant is in combination with harvested bone.